Our Quality Of Water Is Crystal Clear

It's easy to see why our drinking water is considered some of the finest available anywhere in the United States; in fact, it's crystal clear. We are blessed with two exceptional water sources that provide our customers with the highest quality of water available.

Our primary source of water is located in eastern Buncombe County where the water flows from pure mountain springs and streams into lakes known as the North Fork and Bee Tree Reservoirs. They are located in Black Mountain and Swannanoa respectively. These pristine lakes are surrounded by 20,000 acres of highly protected mountain forests owned by the City of Asheville. This preserved land is nature's perfect water filter. The water is so pure that very little treatment is required.

Our additional source of water is the Mills River, which was brought on-line in late 1999. The Mills River Watershed is very different from our watershed in the east; however, it still provides an excellent source of water. The watershed covers 47,440 acres in Henderson and Transylvania counties, with approximately 75 percent of it being in the Pisgah National Forest. It is a mixture of forest, farmland, and low density development. This mixture of forest and low-density development accounts for the excellent water quality in the Mills River.

We Provide Quality You Can Depend On

We are proud of the exceptional quality of water that flows through our system to your household or business daily. We treat it very carefully at our state-of-the-art water treatment plants to enhance its quality. The North Fork Water Treatment Plant, built in 1955 and later expanded to a current capacity of 31 mgd (million gallons per day), operates using a conventional direct filtration process. Lake water from the pristine North Fork Reservoir is pre-chlorinated and mixed with a polymer to coagulate suspended particles that come from the lake. After mixing, the water flows through the filters, which remove coagulated particles and the polymer. Following filtration, the pH is adjusted, fluoride is added for dental health purposes, corrosion inhibitors are added, and the water is once again chlorinated for further disinfection.

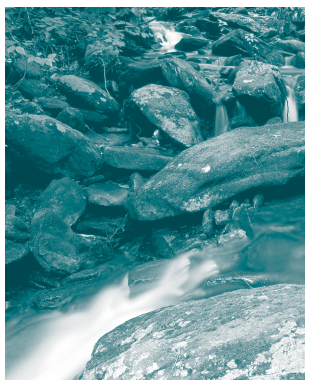
The 5 mgd Mills River Water Treatment Plant was designed to produce drinking water that is comparable to the high quality water that comes from our North Fork Reservoir. The treatment process is more complex than at the North Fork facility; and it includes ozone treatment for disinfection to aid the taste, smell, and quality of water. Water is taken from the Mills River and pumped first to an untreated water storage reservoir where suspended materials are settled out. The settled water is pumped to the pre-ozonation system to begin disinfection; it flows to the rapid mixers where chemicals are added to produce suspended particles; it moves into settling basins where the heavy particles settle out; and it travels back to the ozonation system for further disinfection. It then passes through filters containing granular activated carbon, the pH is adjusted, and fluoride is added. Finally corrosion inhibitors and chlorine are added to enhance water quality in the distribution system.

After treatment, the water travels through over 1,600 miles of water lines and is stored in 20 reservoirs located throughout the distribution system. Each day, our water system delivers an average of 21.6 million gallons of water to over 116,000 people in Asheville, Buncombe County, and Henderson County.

Regardless of the source of water or treatment facility processing the water, you can be sure that the product delivered to your tap surpasses all Safe Drinking Water Standards set by the EPA. The employees of the Water Resources Department are committed to treating your water with extraordinary care by perfectly blending science and nature. The result for you is the clear, pure water you receive at your tap.

We Make Sure Your Water Surpasses All Drinking Water Standards

Water treatment and quality specialists worked throughout the year at our state-of-the-art water treatment facilities to provide a supply of high quality water from some of the purest sources in the United States. We take pride in providing exceptional drinking water that continues to surpass all Safe Drinking Water Standards set by the Environmental Protection Agency (EPA). This Annual Water Quality Report provides details about the quality of your water, where it comes from, and how it is treated. You may expect an update of this report each year.



The Regional Water Authority (the Authority) is required to test for over 128 constituents (substances) to make sure that the water you drink is safe. In 2002, only 15 of these substances were detected and they were well within safe levels – making our drinking water one of the best sources of water in the country. The table on the inside of this brochure lists these 15 substances and shows that our water had zero violations of any standards during 2002.

Regional Water Authority Improvements In 2002

- Completed enlargement of the Bee Tree Spillway at a cost of $6.7 million, which will improve the safety and reliability of our Bee Tree water supply.
- Received $8 million in grant funds to replace approximately 25 miles of aging 2-inch water lines with 6 or 8 inch water lines thus improving water service and fire protection and reducing leakage.
- Began replacement of the 90-year old Haywood Street waterline, which will be upgraded from a 6-inch to a 12-inch water line and will improve fire flow, reduce leakage, and accommodate future growth in the downtown area.
- New leak detection equipment is used to detect underground leaks and to detect the source of leaks within 10 feet, which will reduce leakage and the cost of repairing leaks.

Citizen Input Welcome

We invite our customers to learn more about the Regional Water Authority. Citizens are welcome to attend regular meetings of the Authority at 8:45 a.m. on the third Tuesday of every month. Questions regarding water quality, water bills, or any other questions can be answered by calling the City's Customer Services Division at 251-1122.

REGIONAL WATER AUTHORITY
ASHEVILLE • BUNCOMBE • HENDERSON
PO Box 7148, Asheville, NC 28802

2002 ANNUAL WATER QUALITY REPORT

QUALITY You Can DEPEND On

If this information looks familiar, it should. We have mailed similar information to customers each year for four years. Why every year? It's the law. Drinking water regulations require us to produce and mail this information to our customers every year. Most of the language is also required – Congress and the EPA want to be sure every community knows what is in their drinking water. We agree. So we take the extra effort to make this complex information attractive, readable and at a low cost.

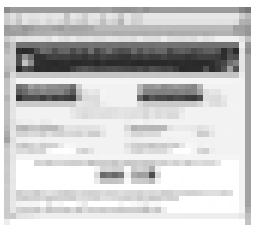
REGIONAL WATER AUTHORITY
ASHEVILLE • BUNCOMBE • HENDERSON

Utility Billing On-Line

We're making things easier for you

Utility Billing On-Line offers customers a convenient method of tracking their water, sewer, recycling and fire line services and provides a record of the amount of water they use over a period of time. Customers can even access charts that graphically display water consumption and provide comparisons of billing and payment information.

Simply access the City's web site from your home or office, 24-hours per day, 7 days a week at www.ashevillenc.gov. Enter the eGov page, and click on "Utility Billing On-Line" to access all of your information at the touch of a button.



Just follow a few simple steps that will ensure that your information is kept in a confidential and secure manner, and you will be on your way to accessing your accounts at your convenience.

More About Lead And Copper

The primary source of lead and copper in tap water is in a customer's home plumbing system. These elements can leach (dissolve) into the water from a building's plumbing through corrosion if the water has been standing in the pipes for several hours. To prevent corrosion from occurring, the Authority has effectively implemented a system-wide corrosion control treatment. At the treatment plants, sodium hydroxide is added to increase the water's natural pH; sodium bicarbonate is added to increase alkalinity; and zinc orthophosphate is added as a corrosion inhibitor. This treatment minimizes corrosion of the pipes.

Buildings at risk for lead or copper in the water are those that have lead service or that have lead solder in copper pipes. Many homes built before 1986 were built with plumbing systems that contained lead solder in the copper pipes. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of the materials used in your home's plumbing. If you are concerned about elevated lead levels in your water at home, you may wish to have your water tested. Also, flush your tap until it becomes noticeably colder (approximately 30 seconds to 2 minutes) before using tap water. This will ensure you draw fresh water from the tap – not water that has been standing in your plumbing for several hours or overnight. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Our Water Quality Surpasses All Requirements

Out of 128 possible substances tested only 15 were detected – making our drinking water one of the best sources of water in the country. The following regulated substances were detected (within very safe limits) in our "finished" drinking water as analyzed between January 1 and December 31, 2002. "Finished" water is the water that leaves our treatment plant and is distributed throughout the system.

Substance and Unit of Measurement	Ideal Goal– MCLG	Highest Level Allowed – MCL	Results	MCL Violation Y/N	EPA Definition of Potential Source(s) of Substance	Comments on Our Water
REGULATED AT THE TREATMENT PLANT						
Fluoride (mg/l)	4	4	High 1.00 Range (0.97-1.00)	N	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.	Added to the water to prevent tooth decay. Sample date = 5/30/02.
Nitrate (mg/l)	10	10	High 0.20 Range (0.16 - 0.20)	N	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks; sewage.	Sample dates = 2/4/02 and 5/30/02.
Turbidity (NTU)	N/A	TT = 5 NTU and 95% of samples < 0.3 NTU	High 0.57 98.9% samples < 0.3 NTU	N	The likely source is soil runoff. Turdidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.	0.57 NTU was observed at the Mills River Plant on 3/16/03.
Total Organic Carbon (mg/l)	N/A	TT	Average 0.56 Range (ND - 2.08)	N	Naturally occurring in the environment.	Mills River =0.51(avg) and North Fork = 0.61(avg).
Gross Alpha Emitters, pCi/l	0	15	0.525 (avg)	N	Erosion of natural deposits.	Samples were analyzed in 1999/2000. Samples required every 4 years.
Gross Beta/Photon Emitters, pCi/l	0	50	0.7125 (avg)	N	Decay of natural and man-made deposits.	Samples analyzed in 1999/2000. Samples required every 4 years.
REGULATED AT THE CUSTOMER'S TAP						
Copper (mg/l)	1.3	AL = 1.3	0.077 at 90th percentile	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	None of the targeted 33 sampling sites exceeded the Action Level. Samples were collected in June/ July 2000.
Lead (ppb)	0	AL = 15	11 at 90th percentile	N	Corrosion of household plumbing systems; erosion of natural deposits.	2 out of 33 sampling sites exceeded the Action Level. Samples were collected in June/July 2000.
REGULATED IN THE DISTRIBUTION SYSTEM						
Total Coliform Bacteria	0	5% of monthly samples positive	2% (2 positive)	N	Naturally occurring in the environment.	1 positive sample 10/03/02 and 1 on 10/14/02. All follow-up samples were negative.
E. Coli Bacteria	0	5% of monthly samples positive	1% (1 positive)	N	Human and animal fecal waste	1 positive sample on 10/14/02. All follow-up samples were negative.
Total Trihalomethanes (ppb)	0	80	System Avg. 19.9 Range (4.3 - 49.1)	N	By-product of drinking water chlorination.	Sampled in 2002. Mills River=16.4(avg) and North Fork=23.4 (avg).
Total HAAs (ppb)	NA	60	System Avg. 15.4. Range (ND - 37.4)	N	Total Haloacetic Acid	Sampled in 2002.
UNREGULATED AT THE TREATMENT PLANT						
Sulfate (mg/l)	500 Proposed	NR	Average 7.6 Range (4 - 11.1)		Naturally occurring mineral in soil.	Sampled 2/15/02 and 5/30/02.
Chloroform (ppb)	NR	NR	Average 2.94 Range (ND - 5.88)		Component of Total Trihalomethanes.	Sampled 5/30/02.
Bromodichloromethane (ppb)	NR	NR	Average 0.55 Range (ND - 1.10)		Component of Total Trihalomethanes.	Sampled 5/30/02.

This table summarizes results for calendar year 2002 except for Gross Alpha and Gross Beta which were tested in 1999/2000 and Lead and Copper which were tested in June/July 2000.

2002 PHYSICAL AND MINERAL CHARACTERISTICS

The following constituents analyzed in your water are indicators of the appearance, taste, and mineral content of the drinking water delivered to your tap.

Constituent	Annual Average
pH, standard units	7.7
Alkalinity, mg/l	24.9
Hardness, mg/l	3.9
Sodium, mg/l	17.0
Chloride, mg/l	2.6

En Espanol: Este Informe contiene information muy importante. Traduscalo o hable con un amigo quien lo entienda bien.

KEY TO UNIT ABBREVIATIONS

NR = Not regulated.
ND = Not detected.
N/A = Not applicable.
< = Less than.
mg/l = milligrams per liter, or parts per million.
MCL = Maximum Contaminant Level; the highest level of a contaminant that is allowed in drinking water.
MCLG = Maximum Contaminant Level Goal; the level of a contaminant in drinking water below which there is no known or expected risk to health.
AL = Action Level; the concentration of a contaminant that triggers treatment or other requirements that a water system must follow. Action Levels are reported at the 90th percentile for homes at greatest risk.
ppb = Parts per billion or micrograms per liter.
TT = Treatment Technique; a required process intended to reduce the level of a contaminant in drinking water.
pCi/l = Picocuries per liter is a measure of the radioactivity of water.
NTU = Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.

What EPA Wants You To Know

EPA requires us to inform you that some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

The EPA also requires us to tell you that the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases radioactive material, and may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water ***before*** it is treated include microbial contaminants, inorganic contaminants, pesticides and herbicides,

radioactive contaminants, and organic chemical contaminants. The Authority has one of the purest sources of water in the country, thus minimizing any chance of contamination.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. It is important to remember that the presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that your tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants. The Food & Drug Administration established limits for contaminants in bottled water which must provide the same level of protection. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).